

MEMS DEVICE WITH INTEGRAL PACKAGING**ABSTRACT OF THE DISCLOSURE**

[0080] A MEMS device and method of making same is disclosed. In one embodiment, a micro-switch includes a base assembly comprising a movable structure bearing a contact pad. The base assembly is wafer-scale bonded to a lid assembly comprising an activator and a signal path. The movable structure moves within a sealed cavity formed during the bonding process. The signal path includes an input line and an output line separated by a gap, which prevents signals from propagating through the micro-switch when the switch is deactivated. In operation, a signal is launched into the signal path. When the micro-switch is activated, a force is established by the actuator, which pulls a portion of the movable structure upwards towards the gap in the signal path, until the contact pad bridges the gap between the input line and output line, allowing the signal to propagate through the micro-switch. Prior to bonding, the MEMS structures are annealed on a first wafer and the conductive traces and other metals are annealed on a second wafer to allow each wafer to be processed separately using different processes, e.g., different annealing temperatures.

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